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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,249	01/04/2002	Eric C. Anderson	18602-06614	1772

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EXAMINER

WHIPKEY, JASON T

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,249

Applicant(s)

ANDERSON, ERIC C. *ER*

Examiner

Jason T. Whipkey

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,11-13,21-23,28-30,35-38 and 40-46 is/are rejected.
- 7) ☒ Claim(s) 3,5-8,14-20,24-27,31-34 and 39 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Reissue Application

- X 1. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

Claim Objections

- ✓ 2. Claim 36 is objected to because of an informality. On line 11, "than" is misspelled as "then." Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 42, 45, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- ✓ 5. Claims 42 and 45 recite the limitation "the auto-rotate unit" on line 3 of both. There is insufficient antecedent basis for this limitation in the claim.

- ✓ 6. Claim 46 recites the limitation "the image sensor" on line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4, 11, 12, 36-38, and 40-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoneyama.

Regarding claims 1, 36, 37, 40, 42, 45, and 46, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Calculations for rotating the captured image may be performed according to the program of a microcomputer operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). It is inherent that microcomputers have memory. Therefore, coordinate axis converter 16 acts as a memory, image rotator, and image processing unit.

Photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output

(column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Regarding claim 2, coordinate axis converter 16 uses captured image data from photoelectric converter 2 to output a corrected video signal (column 3, lines 8-32).

Regarding claim 4, it is inherent that if slant angle θ were equal to zero degrees, the output data would not be rotated — otherwise, the image data output would be erroneously rotated.

Regarding claim 11, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Though not specifically stated, camera orientation detection and image capture must be substantially simultaneous because the camera is a video camera.

Memory 10 and memory control unit 9 perform image processing on the captured data. Photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Regarding claim 12, photoelectric converter 2 generates at least one additional row and column of image data beyond what the user intended to capture, as described in the rejection of claim 11.

Regarding claim 38, coordinate axis converter 16 acts as an image processing unit and image rotator as described in the rejection of claim 37.

Regarding claims 41 and 44, as shown in Figure 3, only a subset of the captured image data, such as second video region 63, is read out from video margin circle 61 based on the output of slant detector 8.

The preamble of claim 43 has no patentable weight. See MPEP §2111.02. This claim may therefore be treated like claim 1.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 21, 22, 28, 29, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama.

Claim 21 may be treated like claim 1. However, Yoneyama is silent with regard to using multicolor image data. The advantage to using multicolor image data is that more realistic video can be conveyed to the viewer. For this reason, it would have been obvious to have Yoneyama's video camera generate multicolor image data.

Regarding claim 22, photoelectric converter 2 generates at least one additional row and column of image data beyond what the user intended to capture, as described in the rejection of claim 11.

Claim 28 may be treated like claim 21. Additionally, since only a sub-array of image data from video margin circle 61 is used in the output signal, at least one fewer row and column are used in the output signal than in the input signal.

Yoneyama is silent with regard to using a computer program to control the entire system.

Hardware and software are art-recognized equivalents for the same purpose. See MPEP §2144.06. One specific advantage to controlling the system with software is that the instructions would be upgradeable for future use. For this reason, it would have been obvious to have image capture, rotation, and processing controlled by software.

Regarding claim 29, photoelectric converter 2 generates at least one additional row and column of image data beyond what the user intended to capture, as described in the rejection of claim 11.

Claim 35 may be treated like claim 1. Additionally, since only a sub-array of image data from video margin circle 61 is used in the output signal, at least one fewer row and column are used in the output signal than in the input signal.

Yoneyama is silent with regard to using multicolor image data. The advantage to using multicolor image data is that more realistic video can be conveyed to the viewer. For this reason, it would have been obvious to have Yoneyama's video camera generate multicolor image data.

11. Claims 13, 23, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama in view of Tabei.

Claims 13, 23, and 30 may be treated like claims 11, 21, and 28, respectively. However, Yoneyama is silent with regard to using defect-correcting means in the camera.

Tabei discloses a defective pixel correction circuit that receives an output from an imaging device and detects and corrects defects produced by the device (column 1, lines 5-6). The advantage to using a defective pixel correction circuit is that more accurate image information may be presented to the viewer. For this reason, it would have been obvious for Yoneyama to include a defective pixel correction circuit.

Allowable Subject Matter

12. Claims 3, 5-8, 14-20, 24-27, 31-34, and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3, 5-8, 14-20, 24-27, and 31-34, no prior art could be located that teaches or fairly suggests a camera with (a) an orientation sensor that determines whether the camera is held in either a portrait or landscape orientation, and (b) an image rotator for calculating a rotated image based on the result of the orientation.

Regarding claim 39, no prior art could be located that teaches or fairly suggests an image capture unit that adds additional rows and columns to the output of an image sensor for rotating the image in response to an orientation signal.

13. Claims 9 and 10 are allowed. No prior art could be located that teaches or fairly suggests a camera with (a) an orientation sensor that determines whether the camera is held in either a portrait or landscape orientation, and (b) an image rotator for calculating a rotated image based on the result of the orientation.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason T. Whipkey, whose telephone number is (703) 305-1819. The examiner can normally be reached Monday through Friday from 8 A.M. to 5:30 P.M. eastern daylight time, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9314 for both regular communication and After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

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or faxed to (703) 872-9314 for either formal or informal communications intended for entry. (For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**".)

Hand-delivered responses should be brought to the sixth floor receptionist of Crystal Park II, 2121 Crystal Drive in Arlington, Virginia.

JTW

JTW

September 17, 2002


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600